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BURNS DOANE SWECKER & MATHIS L L P
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EXAMINER

AUGHENBAUGH, WALTER

ART UNIT PAPER NUMBER

1772

DATE MAILED: 03/26/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/700,840

Applicant(s)

BERGHOLTZ ET AL.

Examiner

Walter B Aughenbaugh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☒ Claim(s) 12 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Acknowledgement of Applicant's Amendments

1. The amendments made in Claims 1-3, 5, 6 and 8 given on pages 1-3 of Applicant's Amendment (Paper #13) have been received and considered by Examiner.
2. The cancellation of claim 4 in Applicant's Amendment (Paper #13) has been acknowledged by Examiner.
3. New claims 9-16 given on pages 3-4 of Applicant's Amendment (Paper #13) have been received and considered by Examiner.

WITHDRAWN REJECTIONS

4. The 35 U.S.C. 112 rejection of claim 1 made of record in paragraph 9 of Paper #12 has been withdrawn due to Applicant's amendment in Paper #13.
5. The 35 U.S.C. 102(b) rejection of claims 1 and 2 as anticipated by Akao et al. made of record in paragraph 11 of Paper #12 has been withdrawn due to Applicant's amendments and has been replaced with the new 35 U.S.C. 102(b) rejection of claims 1 and 2 as anticipated by Akao et al. made of record in this Office Action (Paper #14).
6. The 35 U.S.C. 103 rejection of claim 3 over Akao et al. in view of Rosen made of record in paragraph 8 of Paper #7 has been withdrawn due to Applicant's amendments and has been replaced with the new 35 U.S.C. 103 rejection of claim 3 over Akao et al. in view of Rosen made of record in this Office Action (Paper #14).
7. The 35 U.S.C. 103 rejection of claim 4 over Akao et al. in view of Rosen made of record in paragraph 8 of Paper #7 has been withdrawn due to Applicant's cancellation of claim 4 in Paper #13.

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8. The 35 U.S.C. 103 rejection of claims 5-7 over Akao et al. in view of the admitted prior art of Applicant made of record in paragraph 9 of Paper #7 has been withdrawn due to Applicant's amendments.

9. The 35 U.S.C. 103 rejection of claim 8 over Akao et al. in view of Johansson et al. made of record in paragraph 10 of Paper #7 has been withdrawn due to Applicant's amendments.

NEW OBJECTIONS

10. Claims 12 and 16 objected to because of the following informalities: is "volastonite" misspelled? Appropriate correction is required.

NEW REJECTIONS

Claim Rejections - 35 USC § 102

11. Claims 1, 2, 5-10, 12-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Akao et al.

In regard to claims 1 and 12, Akao et al. teach a packaging material having at least one light-shielding layer having an ultraviolet absorber (col. 11; lines 58-67 and col. 28, line 56-col. 29, line 9), and therefore teach a packaging material comprising at least one layer of plastic that prevents the transmission of ultra-violet light as claimed by Applicant. Akao et al. teach that light-shielding materials are added to the packaging material (col. 15, lines 61-65). Akao et al. identify carbon black as a particularly preferable light-shielding material (col. 16, lines 29-33). Akao et al. teach that a suitable content of light-shielding material is 0.01 to 30 wt.% and that a suitable amount of carbon black is 0.05 to 20 wt.% (col. 19, lines 26-51), and a content of 0.05 to 50 wt. % of light-shielding material is claimed for the flexible sheet (item 3a) (col. 3, lines 1-25 and col. 55, lines 60-62). Akao et al. further identify montmorillonite, dolomite, calcium

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carbonate, talc, mica and clay as preferable light-shielding materials (col. 15, line 66-col. 16, line 15 and col. 17, line 19-39). Montomorillonite, dolomite, calcium carbonate, talc, mica and clay are light-reflecting minerals. Akao et al. teach the blending of light-shielding materials to ensure light-shielding ability and to improve other physical properties (col. 15, lines 63-65) and Akao et al. further teach the blending of light-shielding materials in the form of colored pellets, dispersible powder, masterbatch pellets, wet granular powder or dry powder to form various blends of light-shielding material (col. 16, lines 44-58). Furthermore, Akao et al. teach the blending of an antiblocking agent such as calcium carbonate or talc in an amount of 0.01 to 5wt.% in the layers of the invention (col. 23, lines 28-50). Akao et al. also teach the blending of inorganic material having ion exchange ability such as inorganic clay or mica in an amount of 0.01 to 10wt.% with the light shielding material of the invention (col. 32, lines 4-39). Furthermore, Akao et al. teach the blending of one or more of an oxygen scavenger such as activated clay (col. 31, line 6), a moisture absorber such as talc (col. 31, line 59) and an inorganic material having ion exchange ability in a suitable content of 0.01 to 30wt.% (col. 32, lines 52-60). Akao et al. also teaches the blending of calcium carbonate or clay in an amount of 0.1 to 60 wt.% in the layers of the invention (col. 33, line 61-col.34, line 3). Akao et al. therefore clearly teach the blending of carbon black in an amount ranging from about 0.04 to about 1% of the total weight of the plastic layer with light-reflecting mineral particles such as montomorillonite, dolomite, calcium carbonate, talc, mica and clay in an amount that overlaps with the claimed range of about 3 to about 80% of the total weight of the plastic layer. Blending of a carbon black and a light-reflecting mineral would result in a uniform distribution of both carbon black and light-reflecting mineral throughout the plastic layer.

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In regard to claim 2, Akao et al. teach that the wear resistant flexible sheet (item 3a, Figures 1-5) is a light-shielding polyolefin resin layer (col. 45, lines 63-64).

In regard to claim 5, Akao et al. teach that light-shielding thermoplastic resin layer (item 7a) (col. 3, line 11 and col. 46, line 13) is sandwiched between light-shielding wear resistant flexible sheet (item 3a) and another light-shielding thermoplastic resin layer (item 7a') (see Figure 3) via direct lamination or coextrusion (col. 6, lines 2-20); Akao et al. therefore teach that the plastic layer preventing the transmission of ultra-violet light is surrounded by outer layers of plastic on both sides of the plastic layer where the outer layers are permanently united to the plastic layer without intermediate binder or adhesive.

In regard to claim 6, Akao et al. teach that the wear resistant flexible sheet (item 3a) is formed from various thermoplastic resin films such as various polyethylene resin films, ethylene copolymer resin films and polypropylene resin films (col. 5, lines 55-59). Akao et al. teach that the various polyethylene resin films, ethylene copolymer resin films and polypropylene resin films for use as the wear resistant flexible sheet (item 3a) are thermoplastic resin films and are therefore taught as materials for use as the thermoplastic resin layers (items 7a and 7a'), and therefore, Akao et al. teach that the plastic of the two outer layers (items 3a and 7a') is the same plastic as the plastic of the layer that prevents transmission of ultraviolet light. Furthermore, Akao et al. teach the use of preferably similar polyethylene resins for the layers of the invention (col. 33, lines 61-66).

In regard to claim 7, Akao et al. teaches that the light shielding material that is included in the two outer layers (items 3a and 7a') is selected, inter alia, from such white pigments as titanium oxide, lead white and zinc white (col. 17, lines 19-41) that would conceal the

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intermediate layer (item 7a) containing carbon black, at least from one direction. Furthermore, Akao et al. teach the inclusion of titanium dioxide (a white pigment) in the layers of the invention (col. 33, line 61-col. 34, line 3) that would conceal the intermediate layer (item 7a) containing carbon black, at least from one direction.

In regard to claim 8, Akao et al. teach a light-shielding bag formed from the packaging material (col. 32, lines 61-63) that is applicable to various photosensitive materials such as food (col. 39, lines 27-31). The limitation "characterized in that it is produced by a combined extrusion and blow moulding operation of a packaging material as claimed in claim 1" is a method limitation that has not been given patentable weight since the method of forming the package is not germane to the issue of patentability of the package itself.

In regard to claim 9, Akao et al. teach the light-shielding bag for various photosensitive materials such as food comprising an intermediate plastic layer and two outer layers on either side of the intermediate layer, wherein the intermediate layer comprises about 0.04% to about 1.0% by weight light absorbing material and about 3% to about 80% light reflecting material and an ultraviolet absorber wherein the light reflecting and light absorbing materials are uniformly distributed throughout the intermediate layer such that the intermediate layer prevents the transmission of ultraviolet light wherein the two outer layers are fabricated from the same plastic as the intermediate layer as discussed above. Akao et al. teaches that the light shielding material that is included in the two outer layers (items 3a and 7a') is selected, inter alia, from such white pigments as titanium oxide, lead white and zinc white (col. 17, lines 19-41) in an amount of 0.01 to 30wt.% (col. 19, lines 26-27) that would conceal the intermediate layer (item 7a) containing carbon black, at least from one direction. Furthermore, Akao et al. teach the inclusion of

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titanium dioxide (a white pigment) in the layers of the invention in an amount of 0.1 to 60wt.% (col. 33, line 61-col. 34, line 3) that would conceal the intermediate layer (item 7a) containing carbon black, at least from one direction. Akao et al. therefore teach that at least one of the outer layers comprises less than about 5% by weight of a white pigment. Akao et al. teach that one layer of the multilayer bag is colored white (col. 43, line 65-col. 44, line 5), and therefore, the bag has a white appearance.

In regard to claim 10, Akao et al. teach that the light absorbing material is carbon black (col. 16, lines 29-33) and that the light reflecting material is selected from montmorillonite, dolomite, calcium carbonate, talc, mica and clay (col. 15, line 66-col. 16, line 15 and col. 17, line 19-39).

In regard to claim 13, Akao et al. teach the inclusion of titanium dioxide (a white pigment) in the layer of plastic (col. 33, line 61-col. 34, line 3).

In regard to claim 14, Akao et al. teach the light-shielding packaging material for various photosensitive materials such as food comprising at least two layers of plastic wherein a first layer of plastic comprises about 0.04% to about 1.0% by weight of a light absorbing material and about 3% to about 80% by weight of a light reflecting material and an ultraviolet absorber wherein the light reflecting and light absorbing materials are uniformly distributed throughout the first plastic layer as discussed above. Akao et al. further teach a second layer of plastic that comprises less than about 5% by weight of a white pigment as discussed above. The layers are combined such that the layers prevent the transmission of ultraviolet light and while presenting a white appearance when viewed from the second side of the material as discussed above.

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In regard to claim 15, Akao teaches that the plastic of both first and second layers is a polyolefin as discussed above in the rejection to claim 6.

In regard to claim 16, Akao et al. teach that the light absorbing material is carbon black (col. 16, lines 29-33) and that the light reflecting material is selected from montmorillonite, dolomite, calcium carbonate, talc, mica and clay (col. 15, line 66-col. 16, line 15 and col. 17, line 19-39).

Claim Rejections - 35 USC § 103

12. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akao et al. in view of Rosen.

Akao et al. teach a packaging material having at least one light-shielding layer as described above. Akao et al. also teach that flexible sheet 3a has heat-sealability (col. 3, lines 3-5 and col. 55, lines 4-5). Akao et al. teach that heat-sealable layers may be formed from polyolefin resins, and that ethylene copolymer resins are preferred heat-sealable polyolefins due to excellent heat-sealing properties (col. 7, line 65 through col. 8, line 4). Ethylene-propylene copolymer is disclosed as a suitable ethylene copolymer resin (col. 8, lines 5-7). Akao et al. does not teach that the ethylene-propylene copolymer has a melt index between 0.5 and 5 according to ASTM (2.16 kg; 230°C). Rosen, however, teaches a packing material in web or sheet form made from a mineral-filled propylene-based polymer with a melt index of between 0.5 and 5 according to ASTM (2.16 kg; 230°C) (col. 3, lines 43-47). Rosen discloses that preferably the propylene-based polymer is chosen among propylene-ethylene copolymers with a melt index within the above specified range of between 0.5 and 5 since those copolymers have been able to withstand folding and bending operations without cracking even at low temperatures which

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normally occur during the conversion of the packing material into fold packing containers and the subsequent filling of the fold packing containers with liquid food, such as milk (col. 3, lines 55-64). Therefore, one of ordinary skill in the art would have recognized to use a propylene-ethylene copolymer with a melt index of between 0.5 and 5 according to ASTM (2.16 kg; 230°C) as the plastic for the carbon black and mineral-filled layer in order to achieve superior mechanical properties even at low temperatures as taught by Rosen.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used in Akao's packaging material with at least one light-shielding layer a propylene-ethylene copolymer with a melt index of between 0.5 and 5 according to ASTM (2.16 kg; 230°C) as the plastic for the carbon black and mineral-filled layer in order to achieve superior mechanical properties even at low temperatures as taught by Rosen.

13. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akao et al.

Akao et al. teach the bag as discussed above. Akao et al. fail to teach that the intermediate layer of the bag comprises about 65% by weight of the light reflecting material. Akao et al., however, teaches the blending of the light-reflecting materials, calcium carbonate or clay, in an amount of 0.1 to 60 wt.% in the layers of the invention (col. 33, line 61-col.34, line 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a sufficient amount of light reflecting material to the intermediate layer such that the amount of light reflecting material is about 65% by weight of the intermediate layer in order to achieve the optimal degree of light reflection depending on the particular desired end result, since it has been held that discovering an optimum value of a result effective variable involves

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only routine skill in the art in the absence of unexpected results. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

ANSWERS TO APPLICANT'S ARGUMENTS

14. Applicant's arguments in Paper #13 regarding the 35 U.S.C. 102 rejection of claims 1 and 2 as anticipated by Akao et al. (Paper #12) have been fully considered but they are not persuasive.

Contrary to Applicant's assertion that "the reference does not appear to be directed toward a package product that prevents the transmission of UV light", Akao et al. teaches the inclusion of an ultraviolet absorber in the at least one light-shielding layer of the packaging material that is formed into a bag (col. 11, lines 58-67 and col. 28, line 56-col. 29, line 9 and col. 32, line 61) as is made of record in the 35 U.S.C. 102 rejection of claim 1 made of record in this Office Action. Furthermore, contrary to Applicant's assertion that Akao et al. is not "directed to a product that can achieve an overall white appearance despite minimal use of a white pigment such as titanium dioxide", Akao et al. teach the inclusion of titanium dioxide (a white pigment) in the layers of the invention in an amount of 0.1 to 60wt.% (col. 33, line 61-col. 34, line 3) and that one layer of the multilayer bag is colored white (col. 43, line 65-col. 44, line 5). Consequently, Akao et al. teach "a product that can achieve an overall white appearance despite minimal use of a white pigment such as titanium dioxide". A minimal amount of white pigment, as defined by claims 9 and 14 as less than 5% by weight, falls within the rim of limitation taught by Akao et al. of 0.1 to 60wt.%.

The structural and compositional "criteria" presented by Applicant on page 6, line 4 to page 7, line 6 of Paper #13 are all met by the rejections made or repeated in this Office Action (Paper

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#14). The package of Akao et al. is disclosed as being for packaging foodstuffs, as made of record in the 35 U.S.C. 102 rejection of claim 8 made in this Office Action (Paper #14).

In response to Applicant's argument that the claimed packaging material can be recycled with great economy on page 6, line 5 and page 7, lines 7-17, the limitations on which the Applicant relies are not stated in the claims. It is the claims that define the claimed invention, and it is the claims, not specifications that are anticipated or unpatentable. *Constant v. Advanced Micro-Devices Inc.*, 7 USPQ2d 1064. Contrary to Applicant's assertion that "the prior art packaging materials used for the same purpose employ substantially more carbon black", Akao et al. teach that in the case of carbon black, a suitable carbon black content is 0.05 to 20wt.% (col. 19, lines 26-34), a range that overlaps with the claimed range of "about 0.04 to about 1%".

In regard to Applicant's arguments in the last paragraph of page 7, the method of forming the packaging material is not germane to the issue of patentability of the packaging material itself. Therefore, this limitation has not been given patentable weight. However, the limitation that the material require no binders, adhesives or other agents to permanently unite the various layers of the material is taught by Akao et al. as made of record in the 35 U.S.C. 102 rejection of claim 8 made in this Office Action (Paper #14).

15. Applicant's arguments in Paper #13 regarding the 35 U.S.C. 103 rejection of claim 3 over Akao et al. in view of Rosen (Paper #7) have been fully considered but they are not persuasive.

In response to Applicant's piecemeal analysis of the references, it has been held that one cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references. *In re Keller*, 208 USPQ 871 (CCPA 1981). Akao et al. teach "the fabrication of a packaging product of a high density polyethylene or a copolymer of

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ethylene and propylene that is capable of preventing the transmission of UV radiation by resort to the quantities of light absorbing and light reflecting materials of the claim' as clearly made of record in this Office Action (Paper #14). Rosen is relied upon merely for the teaching of an ethylene-propylene copolymer having a melt index between 0.5 and 5 according to ASTM (2.16kg; 230°C).

16. Applicant's arguments in Paper #13 regarding the 35 U.S.C. 103 rejection of claims 5-7 over Akao et al. in view of Applicant's admitted prior art (Paper #7) are rendered moot due to the withdrawal of the rejection in this Office Action (Paper #14). Claims 5-7 are rejected under 35 U.S.C. 102 as anticipated by Akao et al. in this Office Action (Paper #14).

17. Applicant's arguments in Paper #13 regarding the 35 U.S.C. 103 rejection of claim 8 over Akao et al. in view of Johansson et al. (Paper #7) are rendered moot due to the withdrawal of the rejection in this Office Action (Paper #14). Claim 8 is rejected under 35 U.S.C. 102 as anticipated by Akao et al. in this Office Action (Paper #14).

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter B Aughenbaugh whose telephone number is 703-305-4511. The examiner can normally be reached on Monday-Friday from 9:00am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on 703-308-4251. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

wba
03/13/03 WBA


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772 3/21/03